

In 1888 the astronomers of the Old World resolved to make a photographic map of the entire celestial sphere. Two series of observations were taken, one being a photographic reproduction of the starry vault, the other a new catalogue of position of stars greater than those of the twelfth magnitude. Father Denza took a great deal of interest in this work. Like his illustrious friend, Father Secchi, he was an ardent lover of nature and possessed a natural aptitude for the study of astronomy, meteorology, and the natural sciences. He was the founder of the Italian Meteorological Society and for more than a quarter of a century its director-general. Up to the time of his death in 1894, he contributed frequently to the meteorological journals of Europe.

The scientist who now presides is Rev. Angelo Rodriguez; he has a staff of seven assistants. The latitude and longitude of the Specola Vaticana are  $41^{\circ} 54' 4.8''$  north, and  $0^{\circ} 49'' 47''$  east, as given in the American Ephemeris and Nautical Almanac; the last volume of the annals of the observatory on the Leonine tower gives the same longitude, but gives the latitude as  $41^{\circ} 54' 16.7''$ .

The advantages of a great continental weather service, as reflected in the unqualified success of the United States Weather Bureau, have begun to be appreciated by all Europeans. It may be attributed to this that Professor Rodriguez is devoting more time than either of his distinguished predecessors to the meteorological department of the observatory; notwithstanding this he or one of his assistants is constantly at work with the great equatorial. In consequence of the existing relations between the Vatican and the Government of Italy, the observations and publications of the Vatican Observatory have no connection with the general meteorological service of Europe.

I can not conclude these remarks without special reference to the kindness of Professor Rodriguez. Although he could not speak English any better than I could speak Italian, yet, by reason of a certain familiarity with the subject, we managed to carry on an interesting conversation. He is a skilful observer and well versed in the principles of meteorology. To Professor Rodriguez I expressed the hope that I might find an opportunity to write a few lines appreciative of the Specola Vaticana. "Va bene" (go well) said he, and other words, which I interpreted to mean that he would be glad to know that the observatory of which he is director compares favorably with others I had seen in the Old World and the New.

#### RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

H. H. KIMBALL, Librarian.

The following titles have been selected from among the books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be loaned for a limited time to officials and employees who make application for them.

**Austria-Hungary. I. R. Osservatorio Astronomico-Meteorologico di Trieste.**

Rapporto annuale. v. 19, 1902. 107 pp. 4°. Trieste. 1905.

**Bartholomew, J. G. (Ed.)**

The survey gazetteer of the British Isles . . . 928 pp. 4°. London. 1904.

**Batavia. K. Magnetisch en Meteorologisch Observatorium, Regenwaarnemingen in Nederlandsch Indie.** v. 26, 1904. vii, 469 pp. 4°. Batavia. 1905.

**Bloxam, Charles Loudon.**

Chemistry inorganic and organic, with experiments. 9th edition, revised by J. M. Thomson and A. G. Bloxam. xi, 872 pp. 8°. London. 1903.

**Börnstein, R[ichard].**

Unterhaltungen über das Wetter. 48 pp. 12°. Berlin. 1905.

**Canada. Meteorological Service.**

Report of the Meteorological Service of Canada for the year ended Dec. 31, 1903. xix, 384 pp. 4°. Ottawa. 1904.

**Chambers, George F[rederick].**

A handbook of descriptive and practical astronomy. 4th edition. 3 v. 8°. Oxford. 1889-1890.

**Cowling, James.**

Weather instruments for the home. 2d edition. 62 pp. 16°. New Jersey. 1904.

**Fitzner, Rudolf.**

Beiträge zur Klimakunde des Osmanischen Reiches und seiner Nachbargebiete. Part 1. Meteorologische Beobachtungen in Kleinasien 1902. 36 pp. 4°. Berlin. 1904.

**Die Fortschritte der Physik.** I, II, 1904. 8°. Braunschweig. 1904.

**Geographisches Jahrbuch.** 1905. 8°. Gotha. 1905.

**Hann, Julius.**

Lehrbuch der Meteorologie. 2d revised edition. xi, 642 pp. 4°. Leipzig. 1906.

**Hedges, Killingworth.**

Modern lightning conductors: an illustrated supplement to the report of the Lightning Research Committee of 1895 . . . vi, 119 pp. 4°. London. 1905.

**International Geographic Congress, Washington, 1904.**

Report. (58th Congress, 3d session, House doc. 460), 1064 pp. 8°. Washington. 1905.

**Interstate Astronomical and Meteorological Conference, Adelaide, 1905.**

Report. 11 pp. 1°. Adelaide. 1905.

**Kharkof. University. Meteorological Observatory.**

Résultats des observations faites au nouvel observatoire météorologique de l'université de Kharkow. 1901. [Russian and French text.] iv, 131 pp. 8°. Kharkof. 1904.

**Linke, F[ranz].**

Luftelektrische Messungen bei zwölf Ballonfahrten. (Abhandlungen der königlichen Gesellschaft der Wissenschaften zu Göttingen. Math.-phys. Klasse. Neue Folge. Band III. Nro. 5.) 90 pp. 4 tables. 4°. Berlin. 1904.

**Liznar, J[oseph].**

Die barometrische Hohenmessung. 48 pp. 4°. Leipzig. 1904.

**Marriott, William.**

Hints to meteorological observers. Prepared under the direction of the council of the Royal Meteorological Society. 6th edition. 69 pp. 8°. London. 1906.

**Mascart, E.**

Traité de magnétisme. vi, 441 pp. 4°. Paris. 1900.

**Miller, N. H. J.**

Amounts of nitrogen as ammonia and as nitric acid and of chlorine in the rainwater collected at Rothamsted. (From the Journal of Agricultural Science. v. 1, pt. 3, Oct., 1905.) pp. 280-303. 8°. Cambridge (Eng.). [1905.]

**Mysore. Meteorological Department.**

Meteorology in Mysore for 1904 being the results of observations at Bangalore, Mysore, Hassan, and Chitaldrug. xv, 56 pp. 4°. Bangalore. 1905.

**Schubert, J[ohannes].**

Wald und Niederschlag in Schlesien. (Reprinted fr. Zeitschrift für Forst-und Jagdwesen. v. 37, pp. 375-380, June, 1905.) 8°. Berlin. 1905.

**Soddy, Fredk.**

Radio-activity: an elementary treatise from the standpoint of the disintegration theory. xi, 214 pp. 8°. London. 1904.

**Sutton, J. R.**

On the variation of the hourly meteorological normals at Kimberley during the passage of a barometric depression. (From the Transactions of the South African philosophical society. v. 16, pt. 2.) pp. 169-188. 4°.

**Sutton, J. R.**

Some results of observations made with a black bulb thermometer in vacuo. (From the Transactions of the South African philosophical society. v. 16, pt. 2.) pp. 79-96. 4°.

**Tacubaya. Observatorio Astronomico Nacional de Tacubaya.**

Anuario. 1906. 494 pp. 16°. Mexico. 1905.

**Thévenet, [Antoine Francois].**

Recherches sur la prévision du temps en Algérie. 71 pp. 8°. Alger. 1905.

**Wade, E. B. H.**

Report on the use of platinum resistance thermometers in determining the temperature of the air at Helwan Observatory. 24 pp. 4°. Cairo. 1905.

**Voeikov, A[leksandr] I[vanovich].**

Meteorology. [Russian text.] In 4 parts. XVII, 737, VII pp. 8°. St. Petersburg. 1903-04.

#### RECENT PAPERS BEARING ON METEOROLOGY.

H. H. KIMBALL, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or

other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —

*Journal of the Franklin Institute.* Philadelphia. Vol. 161. Jan., 1906.

— Proper site for a windmill. P. 58.

*Journal of the Meteorological Society of Japan.* Tokyo. 24th year. Nov., 1905.

**Wada, Y.** L'observatoire coréen de Séoul et ses observations météorologiques. Pp. 9-14.

*Nature.* London. Vol. 73. Dec. 14, 1895.

— Investigation of the upper air. [Announcement by the meteorological office.] P. 162.

*Nature.* London. Vol. 73. Dec. 21, 1905.

**Shaw, W[illiam] N[apier].** The pulse of the atmospheric circulation. Pp. 175-177.

*Nature.* London. Vol. 73. Dec. 28, 1905.

— Recent studies of periods in meteorology. Pp. 209-210.

*Popular Astronomy.* Northfield, Minn. Vol. 14. Jun., 1906.

**Payne, W[illiam] W[allace].** The color of the sky. [Review of work by Thomas Curran Ryan.] Pp. 5-11.

*Science Abstracts.* London. Vol. 8. Dec., 1905.

**B[utler], C. P.** New method for determining the solar constant. [Abstract of article by Ceraski.] P. 676.

**B[utler], C. P.** Oscillations of solar activity and climate. [Abstract of article by C. Easton.] P. 676.

*Scientific American Supplement.* New York. Vol. 60. Dec. 23, 1905.

— Old-fashioned weather glasses; how they are made. P. 25054.

*Scottish Geographical Magazine.* Edinburgh. Vol. 22. Jan., 1906.

**Watermeyer, F. S.** Geographical notes on South Africa south of the Limpopo. Pp. 29-38.

— The Monte Rosa meteorological observatory. Pp. 43-44.

*Symons's Meteorological Magazine.* London. Vol. 40. Dec., 1905.

— The relation between the circulation of the Atlantic and weather. [Abstract of article by W. Meinardus.] Pp. 201-202.

**Goetz, E.** The Bulawayo meteorological observatory. P. 205.

**British Association Kite Committee.** Report of the British Association Kite Committee. Pp. 206-208.

*Annuaire de la Société Météorologique de France.* Paris. 53 année. Nov., 1905.

**Bruel, G.** Notes sur la météorologie de la région du Chari. Pp. 233-251.

**Garrigou-Lagrange, P.** Les mouvements généraux de l'atmosphère en hiver. Pp. 254-257.

**Brunhes, B[ernard].** Sur une modification de l'appareil de Shaw et Dines pour l'étude des variations brusques de pression barométrique. Pp. 253-254.

*Archives des Sciences Physiques et Naturelles.* Genève. 4 pér. Tome 20. Dec., 1905.

**Arctowski, Henryk.** Les vitesses maxima du vent enregistrées à la Tour Eiffel considérées en fonction de l'âge de la lune. Pp. 687-691.

*Bulletin de la Société Belge d'Astronomie.* Bruxelles. 10 année. Nov., 1905.

**Flamache, A.** Les éclairs sans tonnerre. Pp. 293-296.

*Bulletin de la Société Belge d'Astronomie.* Bruxelles. 10 année. Dec., 1905.

**Gréville, Pierre de.** La météorologie d'Alexandrie et de Beyrouth. Pp. 311-326.

**Durand-Gréville, E.** La loi des grains et des orages. Pp. 326-335.

**Arctowski, Henryk.** Les vitesses maxima du vent à la tour Eiffel et l'âge de la lune. P. 349-352.

*Ciel et Terre.* Bruxelles. 26 année. 16 déc., 1905.

— Les températures minima dans l'Afrique équatoriale du Sud. [Abstract.] Pp. 479-482.

*Comptes Rendus de l'Académie des Sciences.* Paris. Tome 141. 4 déc., 1905.

**Nordmann, Charles.** Sur certaines expériences relatives à l'organisation de l'atmosphère, exécutées en Algérie à l'occasion de l'éclipse totale du 30 août 1905. Pp. 945-948.

**Houllier, —.** De l'influence des pluies estivales sur le débit des sources de plaines. Pp. 972-973.

**Platania, Gaetano and Platania, Giovanni.** Effets magnétiques de la foudre sur les roches volcaniques. P. 974-975.

*La Nature.* Paris. 34 année. 16 déc., 1905.

**Bellet, D.** Le verglas et les voies ferrées électriques. Pp. 33-34.

*La Nature.* Paris. 34 année. 30 déc., 1905.

**Jaubert, Joseph.** Les brouillards dans la région parisienne. Pp. 78-79.

*Le Temps qu'il Fait. Mons. 2 année. Déc., 1905.*

**Bracke, A.** Dictionnaire de fin d'année. Pp. 227-230.

**Bracke, A.** L'enseignement de la météorologie. P. 233-235.

*Beiblätter zu den Annalen der Physik.* Leipzig. Band 29. 1905.

**G[erdien], H.** Die kontinuierliche Registrierung der atmosphärischen Ionisation. [Abstract of article by Ch. Nordmann.] P. 1249.

**G[erdien], H.** Ein Registrieraarapparat für die Ionen der Atmosphäre. [Abstract of article by P. Langevin und M. Moulin.] P. 1249.

*Meteorologische Zeitschrift.* Wien. Band 22. Nov., 1905.

**Hergesell, H[ugo].** Ballonaufstiege über dem freien Meere zur Erforschung der Temperatur und Feuchtigkeitsverhältnisse sowie der Luftströmungen bis zu sehr grossen Höhen der Atmosphäre. Pp. 481-586.

**Hergesell, H[ugo].** Die Erforschung der freien Atmosphäre über dem Atlantischen Ozean nördlich des Wendekreises des Krebses an Bord der Jacht Seiner Durchlaucht des Fürsten vom Monaco im Jahre 1905. Pp. 487-499.

**Hann, J[ulius].** Die temperature der Cyklonen und Anticyklonen. Pp. 490-495.

**Less, E[mil].** Ueber die Wanderung der sommerlichen Regengebiete durch Deutschland. Pp. 496-505.

**Rotch, L[awrence] and Teisserenc de Bort, L[eon].** Experimentelle Konstatierung der Existenz des Gegenpassates. Pp. 506-507.

**Hann, J[ulius].** Resultate der meteorologischen Beobachtungen zu Cuyabá, Matto Grosso, Brasilien. Pp. 507-508.

**H[ann], J[ulius].** R. Mossman über vorläufigen Ergebnisse der meteorologischen Beobachtungen während der schottischen antarktischen Expedition. Pp. 508-510.

**Mossmann, Robert C.** Zur Meteorologie der Laurie-Insel. Pp. 510-513.

— Das Observatorium auf dem Monte Rosa. Pp. 513-514.

— Prohaska über die Bearbeitung der einzelnen Gewitter. Pp. 514-516.

**Reimann, —.** Das Purpurlicht und der Diffraktionsring. Pp. 516-517.

**Siegel, Franz.** Resultate der meteorologischen Beobachtungen zu Curityba im Jahre 1904-1904. Pp. 518-519.

— Prohaska über Zugrichtung, Stärke und Geschwindigkeit der Hagelwetter, Dauer des Hagelfalles 1902 und im Mittel. Pp. 519-523.

**Okada (Tokyo).** Ueber das Klima der Bonin-Inseln. Pp. 523-524.

— William Ellis über die jahreszeitlichen Schwankungen der magnetischen Störungen. Pp. 524-525.

— E. Marchand, Studien über die Wolken. Pp. 526-527.

*Mitteilungen von Forschungsreisenden und Gelehrten aus den Deutschen Schutzgebieten.* Berlin. 18 Band. 1905.

**Thomas, —.** Ergebnisse der meteorologischen Beobachtungen in Deutsch-Südwestafrika im Jahre 1903-04. Pp. 293-302.

— Resultate der meteorologischen Beobachtungen in Swakopmund im Jahre 1904. Pp. 303-304.

*Petermanns Mitteilungen.* Gotha. Band 51. 1905.

**Halbfass, W.** Die Thermik der Binnen-Seen und das Klima. Pp. 219-233.

*Das Wetter.* Berlin. 22 Jahrgang. Dec., 1905.

**Gallenkamp, W.** Die Wärmestrahlung des Himmels. Pp. 265-277.

**Hegyfoky, J.** Zur täglichen Periode des Regens. Pp. 278-282.

**Aßmann, [Richard].** Die internationale Konferenz von Direktoren meteorologischer Institute in Innsbruck. Pp. 284-287.

*Wiener Luftschiffer Zeitung.* Wien. 4 Jahrgang. Dec., 1905.

**Boltzmann, Artur.** Untersuchung der Luftelektrizität vom Ballon aus. Pp. 239-241.

*Arkiv för Matematik, Astronomi och Fysik.* Uppsala. Band 2. N:o 4.

**Holm, Ragnar.** Ueber die abnorm kleine Sonnenstrahlung in den Jahren 1902 und 1903.

*Arkiv för Matematik, Astronomi och Fysik.* Uppsala. Band 2. N:o 7.

**Grenander, S.** Les gradients verticaux de la température dans les minima et les maxima barométriques.

*Hebel en Dampkring.* Den Haag. 3 Jaargang. Dec., 1905.

**Nell, Chr. A. C.** Het noorderlicht van 15 November 1905. Pp. 118-123.

*Memorie della Società degli Spettroscopisti Italiani.* Catania. Vol. 34. 1905.

**Cirera, R. P. R.** Rapport succinct sur l'Observatoire de l'Ebre. Pp. 225-228.

**Ricco, A[mnibale].** Osservatorio solaire di Monte Wilson. Pp. 229-230.